

THIOESTER POLYMER DERIVATIVES AND METHOD OF MODIFYING  
THE N-TERMINUS OF A POLYPEPTIDE THEREWITH

ABSTRACT OF THE DISCLOSURE

The invention provides reagents and methods for conjugating polymers specifically to the  $\alpha$ -amine of polypeptides in high yield. The invention provides monofunctional, bifunctional, and multifunctional PEGs and related polymers having a thioester moiety capable of specifically conjugating to the  $\alpha$ -amine of a polypeptide  
5 having a cysteine or histidine at the N-terminus. The invention provides active thioester derivatives of PEG that have suitable reactivity with an N-terminal cysteine or histidine residue of a polypeptide to produce an amide bond between the PEG and polypeptide. Use of these active esters to prepare PEG-proteins and PEG-peptides is described.